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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/572,722

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Dallas James

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EXAMINER

KENNEDY, JOSHUA T

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,722	Applicant(s) JAMES, DALLAS	
	Examiner JOSHUA T. KENNEDY	Art Unit 3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 12-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 17-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

This application contains claims directed to the following patentably distinct species:

Group I, claim(s) 1-11 and 17-29, drawn to a guardrail having an impact head (Figs. 3-4).

Group II, claim(s) 12-16, drawn to a guardrail having an impact slider (Figs. 1-2).

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species, such as Group I having an impact head that is configured to form a tortuous path to absorb impact energy while the impact slider affects the rail by allowing telescoping ability to the guardrail during impact. In addition, these species are not obvious variants of each other based on the current record.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

During a telephone conversation with Mr. Lawrence Crain on 4/7/2008 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-11 and 17-29. Affirmation of this election must be made by applicant in replying to this Office action. Claims 12-16 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

The drawings are objected to because of several informalities due to the severe lack of clarity in the drawings:

1. It is unclear as to how the cable routing means is configured to form a tortuous path and is further unclear as to how the cables (15 and 15a) extend from the ground through the aforementioned path and attach to the rail. There is nothing that shows the details of this path and there is no point 11a shown in the drawings where the cables attach to the rail.
2. Figures 6A and 6B are generally unclear. Are they top views, cross-sections? If cross-sections, what is the cross-section of 25 supposed to be indicating?
3. It is unclear what comprises the "impact head" and how it structurally cooperates with the remained of the guardrail/cable assembly.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 and 17-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claims 1, 9 and 20, it is unclear as to what "configured to form" is intended to set forth. Is the cable means *capable of* forming a tortuous path? Is the cable means *actually forming* a tortuous path? Further, the term "tortuous" is a relative term which renders the claim indefinite. Does tortuous mean that the path is merely capable of dissipating energy in any way, such as by friction? Does it mean that the path has one turn, two turns, three turns?

Also in Claims 1, 9 and 20, it is unclear as to what structure an "impact head" is intended to set forth. Further, there is no structural cooperative relationship between the impact head and the cable routing means set forth. For example, in claim 28, how does the bar member cooperate with the impact head and the cable(s)?

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: how the frangible fastener is in any way associated with the impact head and the cable routing means structures.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 21-27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Rambaud (US Patent 4,730,810).

As to Claim 1. Rambaud discloses an impact head (1) including a cable routing means (Fig 3A) configured to form a tortuous path through which a cable (34) can be threaded.

As to Claim 2. Rambaud discloses the cable routing means includes a member having two or more cable entry ports through which a cable may be threaded (Fig 3A).

As to Claim 3. Rambaud discloses one or more cables (34) threaded through the cable routing means.

As to Claim 4. Rambaud discloses the cable routing means is configured so that when a force is applied to the impact head the cables are forced through the cable routing means, such that resistance to cable movement provided by the tortuous cable path limits movement of the impact head caused by the force (Col 3, Lines 64-68 and Col 4, Lines 1-3).

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As to Claim 5. Rambaud discloses the cables being under tension (Col 3, Line 66).

As to Claim 6. Rambaud discloses at least one end of the cables being anchored to the ground (32A).

As to Claim 7. Rambaud discloses one end of the cables being anchored to the ground (32A) and a remaining end of the cables is anchored to a rail and/or a support post (2; via 3a).

As to Claim 8. Rambaud discloses the impact head being positioned substantially between the two anchor points (2a, 32a; Fig 1).

As to Claim 21. Rambaud discloses the tortuous path being configured to absorb at least a portion of the kinetic energy of an impact on the impact head (Col 3, Lines 64-68 and Col 4, Lines 1-3).

As to Claim 22. Rambaud discloses the tortuous path being any path that provides sufficient friction to slow down the movement of the impact head during an impact (Fig 3a).

As to Claim 23. Rambaud discloses the tortuous nature of the passage through the cable routing means being provided by one or more turns through which the cable may

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be threaded (Fig 3a).

As to Claim 24. Rambaud discloses the tortuous nature of the passage through the cable routing means being provided by one or more turns of greater than substantially 90° through which the cable may be threaded (Fig 4F).

As to Claim 25. Rambaud discloses the cable routing means including at least one substantially 180° turn (Fig 3a).

As to Claim 26. Rambaud discloses the cable routing means includes at least one substantially S or Z-shaped turn (Fig 4F).

As to Claim 27. Rambaud discloses the cable routing means is adapted so that in use and during a collision or impact with the impact head, the cable is forced through the cable routing means, where resistance to cable movement provided by the tortuous cable path substantially facilitates impact energy dissipation (Col 3, Lines 64-68 and Col 4, Lines 1-3).

As to Claim 29. Rambaud discloses the tension of one or more cables can be adjusted so as to give a suitable resistance to movement (via 37a, 37b).

Claims 9-11, 19 and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Bronstad (US Patent Application Publication 2005/0077508).

As to Claim 9 and 20. Bronstad discloses a guardrail comprising:

a plurality of support posts (72-76);

a plurality of rails (20) slidably interconnected and mounted directly or indirectly to the posts;

at least one cable (52b) provided along at least a part of the length of the slidably interconnected rails wherein at least one end of the at least one cable is fixed in relation to the ground (84); and

an impact head (20) with a cable routing means (54a, 54b) configured to form a torturous path at one end of the slidably interconnected rails and through which the at least one cable is threaded.

As to Claim 10. Bronstad discloses both ends of the at least one cable are fixed in relation to the ground (Fig 2).

As to Claim 11. Bronstad discloses the end of the at least one cable located farthest from the cable routing means is anchored to a rail and/or a support post (Fig 1)

As to Claim 19. Bronstad discloses one or more frangible posts (Figs 15-16) comprising:

a first member substantially orthogonally connected to a second member, wherein the at least one first member has a region of weakness (80).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rambaud and Bronstad, respectively.

The examiner takes official notice that a frangible fasteners are very well known in the guardrail art and it would have been obvious to one of ordinary skill in the art to provide a breakaway connection to the guardrails of Rambaud and Bronstad such that upon impact from an errant vehicle the breaking away of the fastener would minimize damage to the rail and/or post which is being impacted.

Allowable Subject Matter

Claim 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The primary reason for the allowance of the claims is that the prior art of record neither teaches nor suggests the inclusion of the limitation of an impact head of a guardrail having a "cable routing means comprises a bar member having a longitudinal axis and including a cable entry port adapted to allow the cable to pass directly

therethrough when said bar member is in a first non-cable-gripping orientation, and wherein upon rotation of said bar member through at least 90° about said longitudinal axis, a second cable-gripping orientation is reached” (Claim 28). The closest prior art of record, Rambaud and Bronstad taken as a whole, disclose a fence system significantly as claimed, but does not provide any teaching, suggestion, or motivation to modify the prior art as such. There is no cogent reasoning that is unequivocally independent of hindsight that would have led one of ordinary skill in the art at the time the invention was made to modify the prior art to obtain the applicant's invention.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Documents 20060017048, 20050077507, 20040140460, 20020179894, 6173943, 5022782, 6409417, 6065738, 4047702, 4678166, 3776520, 5435524, 5207302, 3738599, 3350039, 5851005 and 6398192 all cited to show similar guardrail and impact head assemblies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA T. KENNEDY whose telephone number is (571)272-8297. The examiner can normally be reached on M-F: 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joshua T. Kennedy/
Examiner, Art Unit 3679

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679